REMARKS

Entry of this response and reconsideration and allowance of the above-identified patent application is respectfully requested. Claims 1-5, 8-10, 12-20, 25-36, and 38-41 were rejected in the Office Action. Claim 15 has been amended. Claims 1-5, 8-10, 12-14, 20, 25-36, and 38-41 have been canceled. Claims 42-46 have been added. Upon entry of this response, claims 15-19 and 42-46 will be pending, of which 15-19 are rejected and claims 42-46 are new. No new matter has been added, and no additional prior art searches are required.

Claims 15-19 stand rejected under 35 U.S.C. § 103 (a) as being unpatentable over U.S. Patent No. 5,490,040 to Gaudenzi *et al.* ("Gaudenzi") taken alone, or in view of U.S. Patent No. 5,772,451 to Dozier II *et al.* ("Dozier) and U.S. Patent No. 4,878,611 to LoVasco *et al.* ("LoVasco"). Also, claims 15-19 stand rejected under 35 U.S.C. § 103 (a) as being unpatentable over Dozier in view of Gaudenzi and LoVasco.

Independent claim 15 is directed to a method of mounting an electrical connector to a substrate. Briefly, the inventive method secures a contact to a pad on a substrate during a reflow process. The inventive method also places a hold down into a hole in the substrate so as to permit the contact to center on the pad upon mounting to the substrate without contacting another pad on the substrate. The hold down is adapted to retain the housing a distance from a surface of the substrate, and to limit flattening of the contact during the reflow process. As now recited in claim 15, subsequent to the securing of the contact, the method secures the hold down to the substrate during the reflow process.

With regard to the patentability of claim 15, the office action suggests that "[c]laim 15 . . . does not recite any order of fusing." Applicants have amended claim 15 to recite that the order of fusing of the hold down to the substrate during the reflow process is "subsequent to the securing of the contact." Therefore, Applicants have amended claim 15 per the Examiner's suggestion and have not raised a new issue.

Also, the office action suggests that "it seems likely that during a reflow process the Gaudenzi solder balls 56 could be fused to substrate 56 prior to final fixation of posts 58 in holes 62." Applicants respectfully disagree.

Quite simply, Gaudenzi does not teach or suggest soldering a standoff to the substrate during the same reflow process that solders the conductive ball to the substrate, as with the present invention. Gaudezi teaches that "the pin is usually ***then*** soldered in place with, for example, 37/63 solder shown at locations 66." (*Gaudenzi* – colum 6, lines 15-17; Figure 8) (emphasis added). By "***then***" applying solder at locations 66, Gaudenzi cannot be said to teach soldering balls to the substrate prior to soldering a standoff to the substrate, and during the same reflow process. Instead, at most Gaudenzi teaches simply connecting the pin and the ball to the substrate during a totally different soldering processes not involving a single pass through the reflow oven.

Similarly, Dozier does not teach or suggest soldering a hold down to the substrate subsequent to soldering the contact to the substrate, and during the same reflow process. Instead, Dozier suggests affixing the pin to the substrate using "a dollop of any suitable adhesive."

(*Dozier* – column 25, lines 52-53). An "adhesive" cannot fairly be suggested to teach or suggest a reflow process that fuses the pins to the holes in the substrate after the solder balls are soldered to the substrate, and during the same reflow process.

Claims 42-46 are directed to a connector/substrate combination that uses the same process as recited in claims 15-19. The patentability of these claims stand or fall with that of claims 15-19. Accordingly, entry of these new claims at this stage should be in order because they do not raise new issues and the arguments with respect to claims 15-19 apply with equal force to claims 42-46.

Accordingly, because neither Gaudenzi nor Dozier teach or suggest the present invention, as amended, applicants respectfully request withdrawal of the rejection of claims 15-19 under 35 U.S.C. § 103 (a) over Gaudenzi alone, or Gaudenzi in view of Dozier and LoVasco. Similarly, applicants respectfully request withdrawal of the rejection of claims 15-19 under 35 U.S.C. § 103 (a) over Dozier in view of Gaudenzi and LoVasco.

CONCLUSION

In view of the foregoing, Applicants respectfully submit that the present application is in condition for allowance. Reconsideration of the application and an early Notice of Allowance are respectfully requested. In the event that the Examiner cannot allow the present application for any reason, the Examiner is encouraged to contact the undersigned attorney, Vincent J. Roccia at (215) 564-8946, to discuss resolution of any remaining issues.

Respectfully submitted,

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Marked up versions of claim 15, which is amended herein, showing all of the changes relative to the previous version of each.

15. A method of mounting an electrical connector to a substrate, comprising:

providing an electrical connector having a contact and a hold down;

providing a substrate having a pad;

securing said contact to said pad on said substrate during a reflow process;

placing said hold down into a hole in said substrate so as to permit said contact to center on said pad upon mounting to the substrate without contacting another pad on the substrate, wherein said hold down is adapted to retain said housing a distance from a surface of the substrate; and

securing said hold down to said substrate during said reflow process subsequent to said securing of said contact, wherein said hold down is adapted to limit flattening of said contact during said reflow process.

Claims 42-46 have been added.